Justin C. Lee

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EDUCATION

CORNELL UNIVERSITY, Ithaca, New York   May 2022, May 2023
Bachelor of Science, Master of Engineering, Computer Science
- ***Double Degree Candidate: Operations Research & Computer Science; GPA: 3.86***
- **Selected Coursework**: Introduction to Analysis of Algorithms, Systems Programming, Learning With Big Messy Data, Data Structures & Functional Programming, Computer System Organization & Programming, Probability & Statistics, Linear Optimization, Stochastic Processes, Microeconomics, Macroeconomics
- **Organizations**: Teaching Assistant: Computer Systems Organization and Programming, Practical Tools for Operations Research, Machine Learning and Data Science, Mews Hall Council

EXPERIENCE

BECTON DICKINSON, Louisville, CO   Summer 2021
R&D Contract Intern, Software and Systems Team
- Integrated a RESTful API with the Arctic Sun user application, enabling real-time wireless data transmission to support teams and allowing increased uptime in patient care settings for therapy devices.
- Implemented a proof of concept of remote-access diagnostic tools to enable real-time device monitoring, screen sharing, and screen control for a customer-facing product.
- Developed software for the Arctic Sun Stat to enable patient case data file collection remotely, without interrupting temperature therapy treatment for patients.
- Wrote technical documentation to onboard Arctic Sun development team to the code required for remote access to the device.
- Pitched the developed features and integrations to marketing, business teams, and upper-level management with great success.

ONEMAIN FINANCIAL, Wilmington, Delaware   Summer 2018
Analyst Intern, Underwriting Strategies Team
- Created a new policy for setting loan amounts for customers to minimize high-risk loans by discovering new insights in multiple customer datasets consisting of unutilized credit bureau data and customer payment history.
- Updated SAS data analytics programs with new rules to retain current customers whilst welcoming previously ineligible customers to the company.
- Optimized loan amount calculator for SAS tools, enabling near-instant load amount decision-making.
- Visualized customer data in Excel to identify potentially new customer segments based on customers' historical payments and other attributes.

PROJECTS

TEXAS HOLD'EM POKER   Sept 2020 - Dec 2020
- Programmed backend code in OCaml for logic to compare different card hands to output the highest hand according and betting logic to restrict player actions according to the official Texas Hold'Em rules.
- Developed the finishing logic of the game to allow the user to continue the game or quit and updated GUI to reflect changes, displaying the player with the largest amount of money to create a better user experience.
- Utilized Test Driven Development using Bisect for OCaml to ensure code correctness according to Texas Hold'em rules.

PREDICTING MUSIC GENRE TRENDS WITH SPOTIFY DATA   April 2021 - May 2021
- Created a report with another classmate to understand what music features correlate to the popularity of genres and forecasted what genres may be popular in the future, to possibly help guide the industry on what to produce.
- Wrote SQL to clean a dataset with over 1 million entries, generated models for forecasting, and created Tableau visualizations to generate meaningful data to understand correlation of music features and historical and future popularities of the music industry.

STOCHASTIC SIMULATION (PERISHABLE INVENTORY MODELING)   March 2021 - April 2021
- Simulated a few million iterations of a store's perishable inventory and profits utilizing a discrete time Markov Chain.
- Trained a neural network to predict future profits and inventory requirements, obtaining a mean squared error of under .02.

SKILLS AND LANGUAGES
- **Programming Languages & Libraries**: Python, Java, oCaml, C, C++, SQL, HTML/CSS, Pandas, Sklearn, Numpy, Tensorflow, Statsmodels
- **Software**: SAS, AMPL, R, Tableau, Microsoft Word, Excel, PowerPoint, Apple Keynote, Pages, Numbers
- **Languages**: Spanish (advanced), Korean (advanced), Chinese (intermediate), German (basic)
- **Skills**: Github, Test Driven Development, Statistical Modeling,

EXTRACURRICULAR ACTIVITIES

CORNELL HEAVYWEIGHT ROWING, Ithaca, NY   Sept 2019 – Present
NCAA Division I Varsity Rowing Team, Varsity Team Manager
- Commit over 20 hours a week attending practice, team meetings, capturing video, creating media, and performing analytical calculations to assist the coaches in making boat lineups.
- Streamlined the distribution of after-practice analytics, allowing for practice data and recordings to be distributed within 30 minutes of ending practice to provide feedback to rowers.
- Create reports to measure growth in teammates' performance and celebrate major achievements and strengthen camaraderie.